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دراسات على الاكتينومايسيتيان الملونة والمعزولة محليا

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Abstract : This study was aimed to investigate the activity of pigmented Actinomycetes, which is widely distributed in agricultural soils in Saudi Arabia. These organisms play an important role in elevating fertility in soils, as well as decomposing the organic matter. Twenty-five isolates were selected for preliminary study, and further more twelve isolates were selected for detailed study, and determination of factor that affecting pigments and antibiotics production. Selected isolates showed high activity in pigment production rather than antibiotics, therefore these two factors were considered separately. Data presenting the effect of physical conditions showed that optimum temperature ranged between 25-35°C. Whilst pH was optimal at alkaline degree, lastly for aeration rates, the preferable rate ranged among 100-120 rpm, and increasing this rate lead to critical aeration that diminished antibiotics production, and increasing pigment formation. This data was applicable for fennentation cultivation, which showed increase in antibiotic production. some isolates were identified according to their morphological and physiological characteristics, and found to be a member of genus Streptomyces sp. Also, antibiotics were tentatively identified by using nuclear magnetic resonance NMR.

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